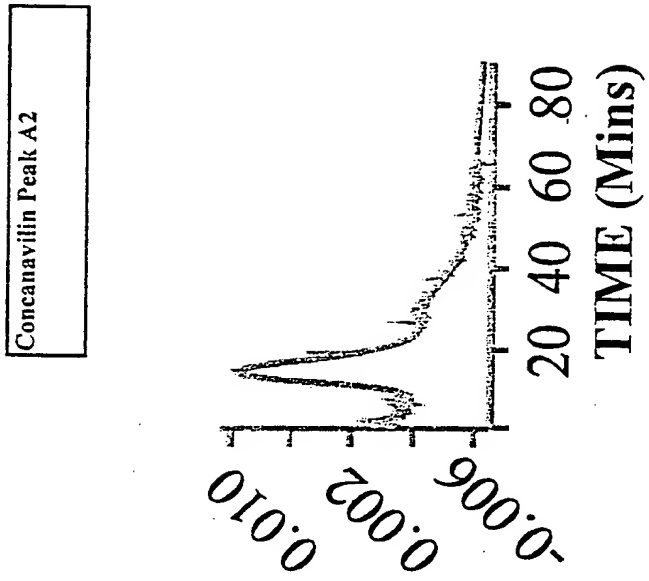

Figure 1b

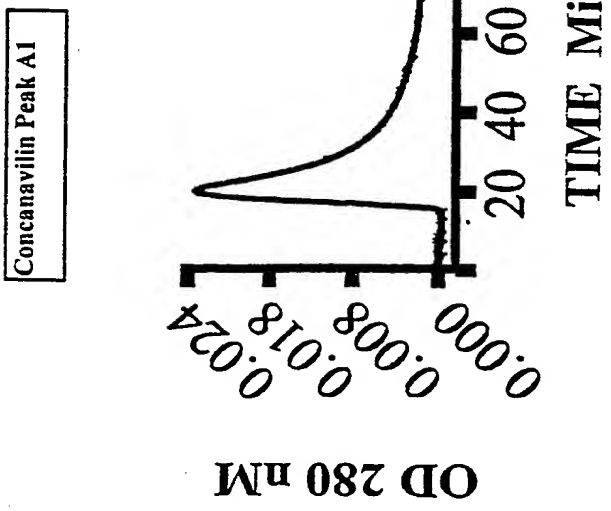

Figure 1a

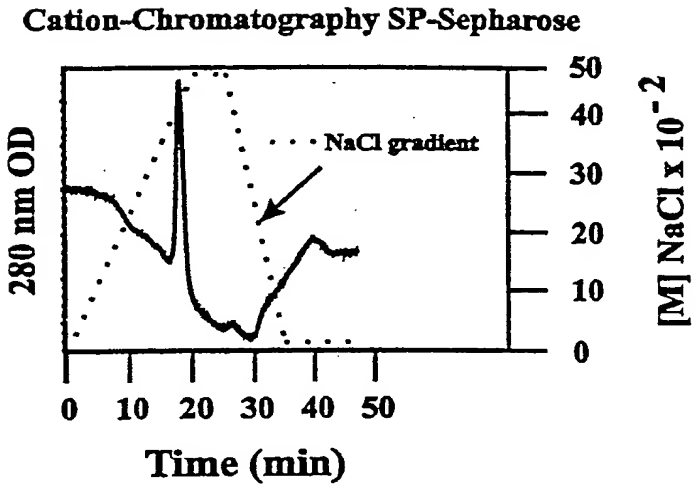
Cation-Chromatography SP-Sepharose
280 nm OD
NaCl gradient
[M] NaCl x 10^{-2}
50
40
30
20
10
0
0 10 20 30 40 50
Time (min)

Figure 2

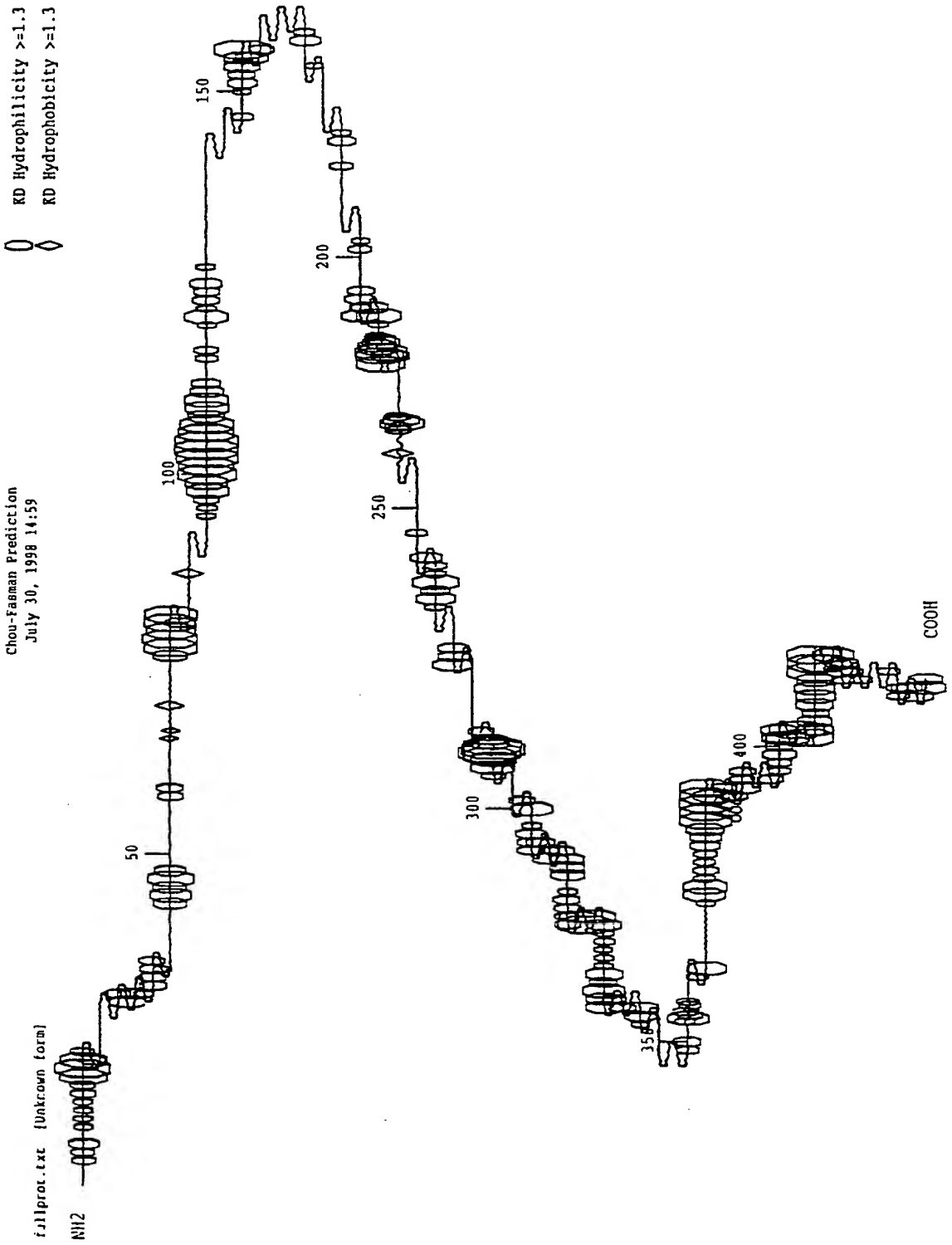
KD Hydrophilicity >=1.3
KD Hydrophobicity >=1.3
Chou-Fasman Prediction
July 30, 1998 14:59
fullprot.txt (Unknown form)
NH2
COOH
50
100
150
200
250
300
350
400

Figure 3

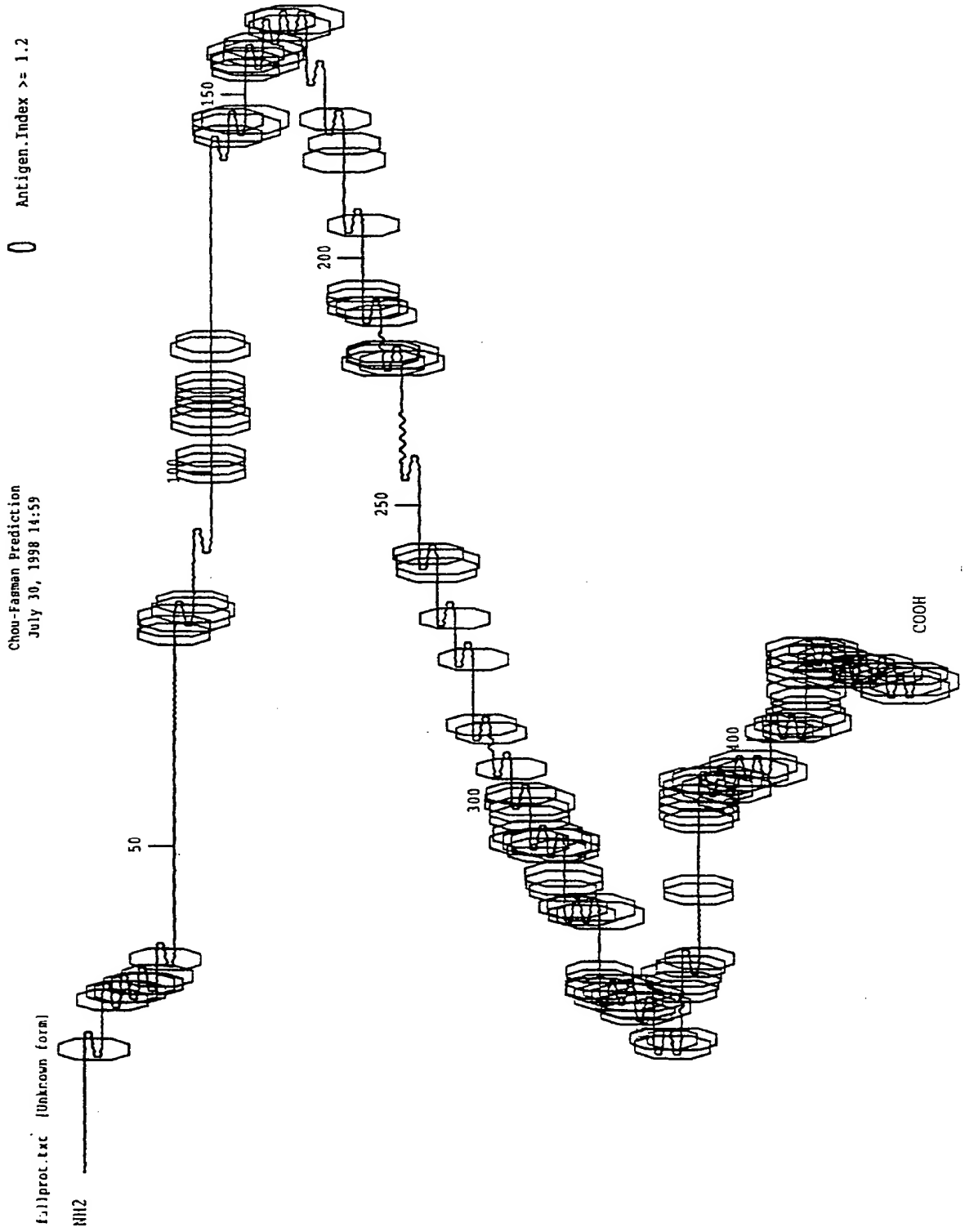
Antigen.Index >= 1.2
Chou-Fasman Prediction
July 30, 1998 14:59
fullprot.txt [Unknown form]
NH2
COOH
50
100
150
200
250
300

Figure 4

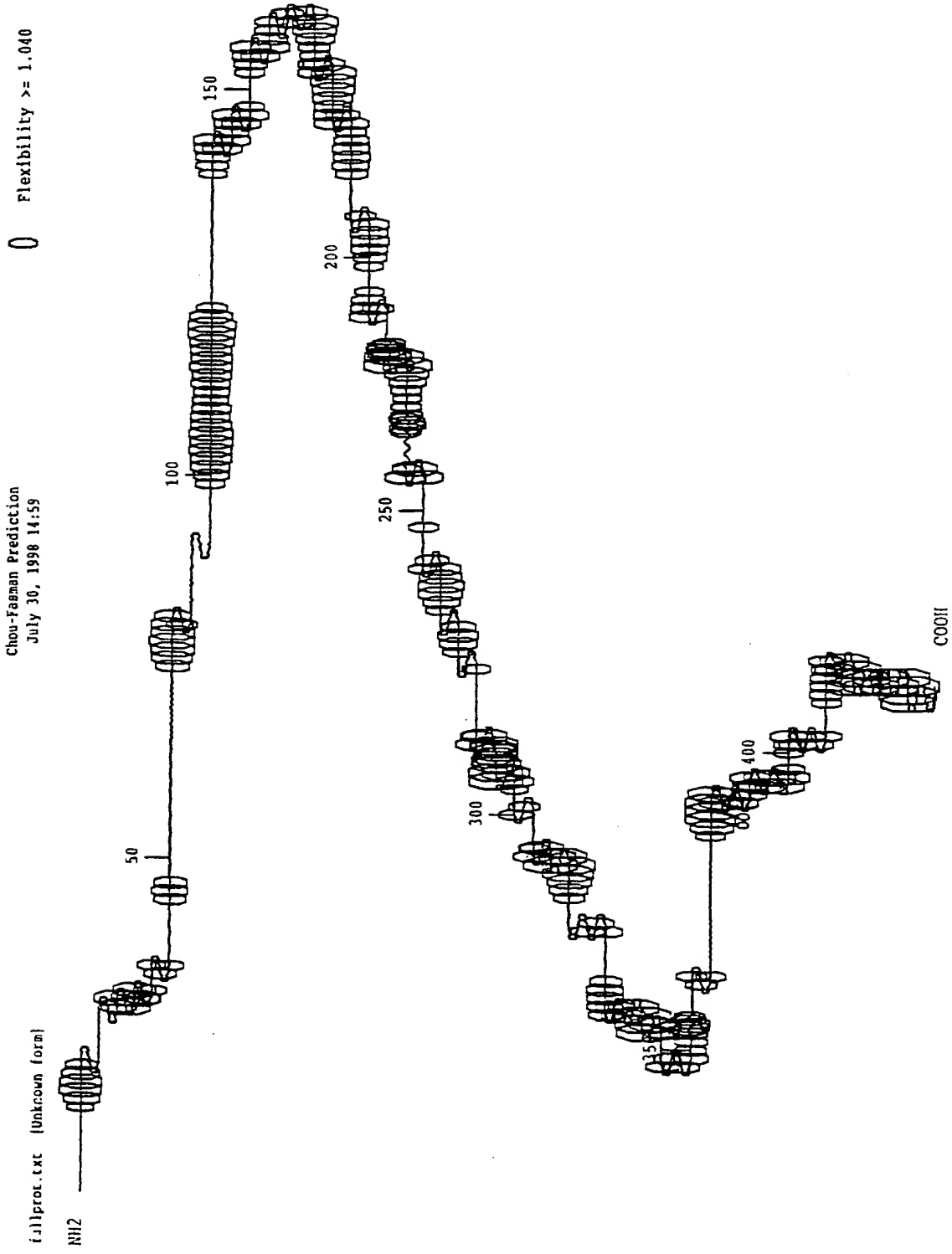
Flexibility >= 1.040
Chou-Fasman Prediction
July 30, 1998 14:59
fullprot.txt (Unknown form)
NH2
COOH
50
100
150
200
250
300
350
400

Figure 5

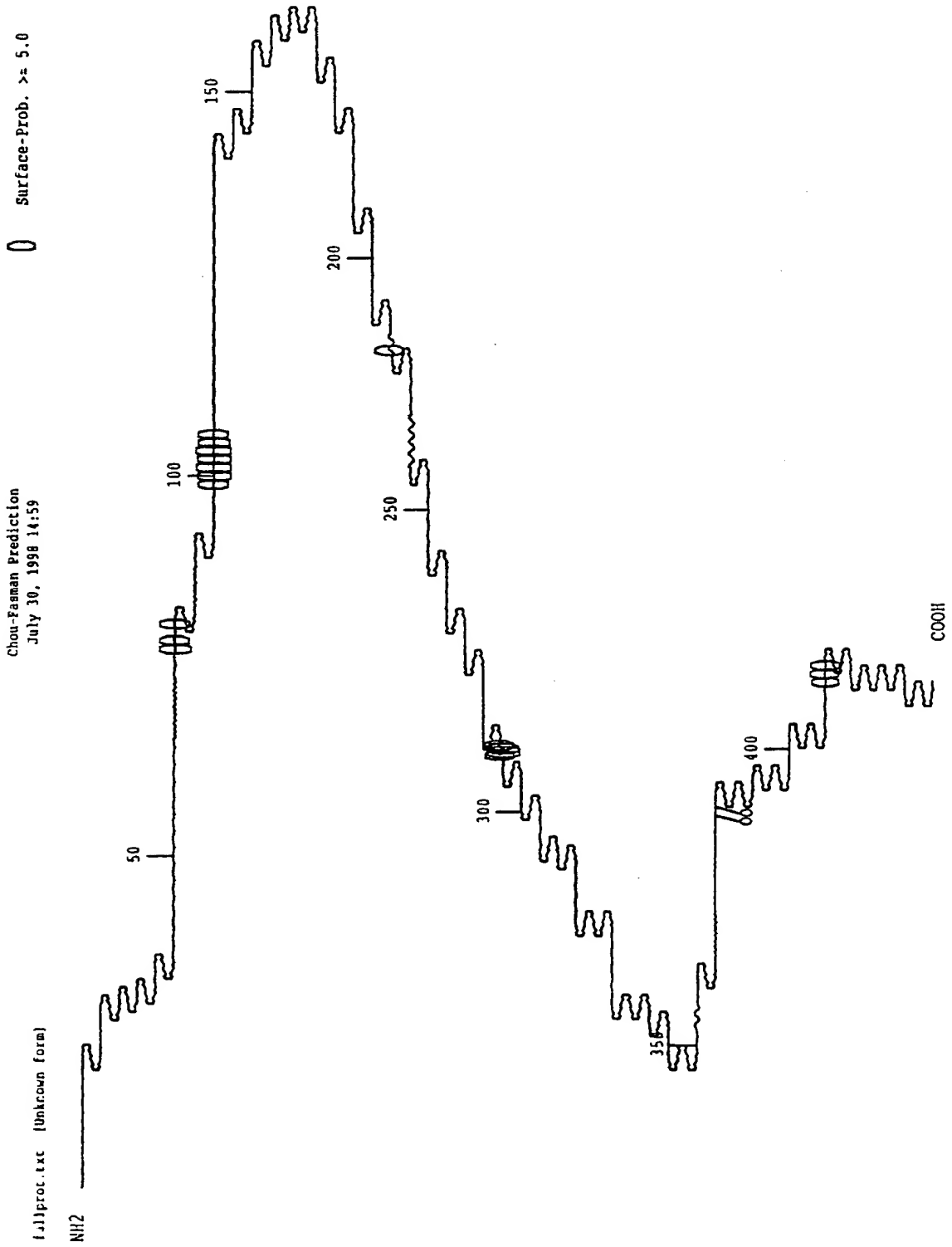
Surface-Prob. >= 5.0
Chou-Fasman Prediction
July 30, 1998 14:59
fulprot.txt (Unknown form)
NH2
COOH
50
100
150
200
250
300
350
400

Figure 6

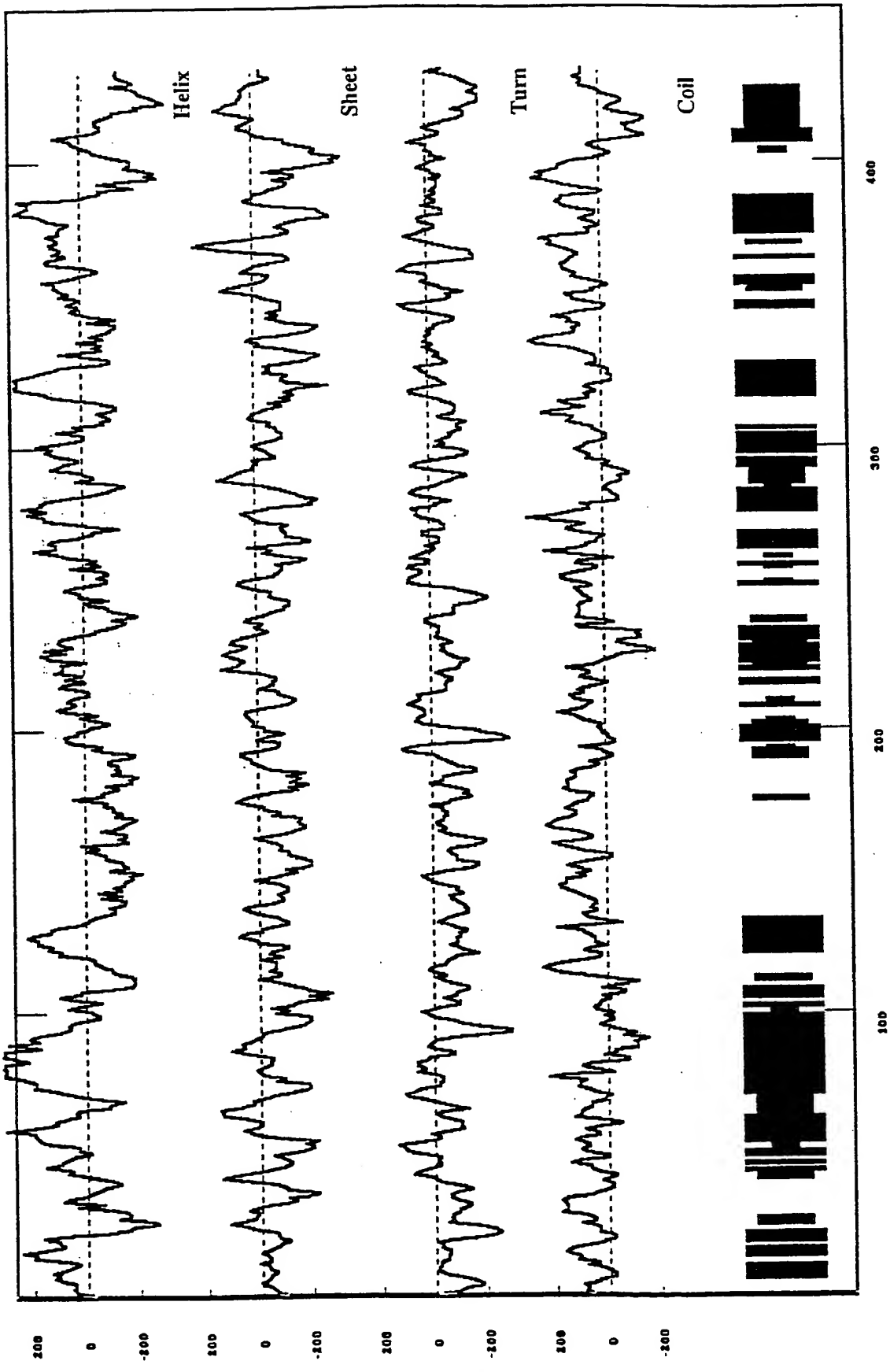

Figure 7

```
 V  N  K  E  Y  S  I  S  N  K  E  N  T  H  N  G  L  R  M  S
GTGAATAAAGAATATAGTATCAGTAACAAAGAGAATACTCACAATGGCCTGAGGATGTCA      60

 I  Y  P  K  S  T  G  N  K  G  F  E  D  G  D  D  A  I  S  K
ATTTATCCTAAGTCAACTGGGAATAAAGGGTTTGAGGATGGAGATGATGCTATCAGCAAA     120

 L  H  D  Q  E  E  Y  G  A  A  L  I  R  N  N  M  Q  H  I  M
CTACATGACCAAGAAGAATATGGCGCAGCTCTCATCAGAAATAACATGCAACATATAATG     180

 G  P  V  T  A  I  K  L  L  G  E  E  N  K  E  N  T  P  R  N
GGGCCAGTGACTGCGATTAAACTCCTGGGGGAAGAAAACAAAGAGAACACACCTAGGAAT     240

 V  L  N  I  I  P  A  S  M  N  Y  A  K  A  H  S  K  D  K  K
GTTCTAAACATAATCCCAGCAAGTATGAATTATGCTAAAGCACACTCGAAGGATAAAAAG     300

 K  P  Q  R  D  S  Q  A  Q  K  S  P  V  K  S  K  S  T  H  R
AAGCCTCAAAGAGATTCCCAAGCCCAGAAAAGTCCAGTAAAAAGCAAAAGCACCCATCGT     360

 I  Q  H  N  I  D  Y  L  K  H  L  S  K  V  K  K  I  P  S  D
ATTCAACACAACATTGACTACCTAAAACATCTCTCAAAAGTCAAAAAAATCCCCAGTGAT     420

 F  E  G  S  G  Y  T  D  L  Q  E  R  G  D  N  D  I  S  P  F
TTTGAAGGCAGCGGTTATACAGATCTTCAAGAGAGAGGGGACAATGATATATCTCCTTTC     480

 S  G  D  G  Q  P  F  K  D  I  P  G  K  G  E  A  T  G  P  D
AGTGGGGACGGCCAACCTTTTAAGGACATTCCTGGTAAAGGAGAAGCTACTGGTCCTGAC     540

 L  E  G  K  D  I  Q  T  G  F  A  G  P  S  E  A  E  S  T  H
CTAGAAGGCAAAGATATTCAAACAGGGTTTGCAGGCCCAAGTGAAGCTGAGAGTACTCAT     600

 L  D  T  K  K  P  G  Y  N  E  I  P  E  R  E  E  N  G  G  N
CTTGACACAAAAAAGCCAGGTTATAATGAGATCCCAGAGAGAGAAGAAAATGGTGGAAAT     660

 T  I  G  T  R  D  E  T  A  K  E  A  D  A  V  D  V  S  L  V
ACCATTGGAACTAGGGATGAAACTGCGAAAGAGGCAGATGCTGTTGATGTCAGCCTTGTA     720

 E  G  S  N  D  I  M  G  S  T  N  F  K  E  L  P  G  R  E  G
GAGGGCAGCAACGATATCATGGGTAGTACCAATTTTAAGGAGCTCCCTGGAAGAGAAGGA     780

 N  R  V  D  A  G  S  Q  N  A  H  Q  G  K  V  E  F  H  Y  P
AACAGAGTGGATGCTGGCAGCCAAAATGCTCACCAAGGGAAGGTTGAGTTTCATTACCCT     840

 P  A  P  S  K  E  K  R  K  E  G  S  S  D  A  A  E  S  T  N
CCTGCACCCTCAAAAGAGAAAAGAAAAGAAGGCAGTAGTGATGCAGCTGAAAGTACCAAC     900

 Y  N  E  I  P  K  N  G  K  G  S  T  R  K  G  V  D  H  S  N
TATAATGAAATTCCTAAAAATGGCAAAGGCAGTACCAGAAAGGGTGTAGATCATTCTAAT     960

 R  N  Q  A  T  L  N  E  K  Q  R  F  P  S  K  G  K  S  Q  G
AGGAACCAAGCAACCTTAAATGAAAAACAAAGGTTTCCTAGTAAGGGCAAAAGTCAGGGC    1020

 L  P  I  P  S  R  G  L  D  N  E  I  K  N  E  M  D  S  F  N
CTGCCCATTCCTTCTCGTGGTCTTGATAATGAAATCAAAAACGAAATGGATTCCTTTAAT    1080

 G  P  S  H  E  N  I  I  T  H  G  R  K  Y  H  Y  V  P  H  R
GGCCCCAGTCATGAGAATATAATAACACATGGCAGAAAATATCATTATGTACCCCACAGA    1140
```

Figure 8

```
 Q  N  N  S  T  R  N  K  G  M  P  Q  G  K  G  S  W  G  R  Q
CAAAATAATTCTACACGGAATAAGGGTATGCCACAAGGGAAAGGCTCCTGGGGTAGACAA    1200

 P  H  S  N  R  R  F  S  S  R  R  R  D  D  S  S  E  S  S  D
CCCCATTCCAACAGGAGGTTTAGTTCCCGTAGAAGGGATGACAGTAGTGAGTCATCTGAC    1260

 S  G  S  S  S  E  S  D  G  D  *
AGTGGCAGTTCAAGTGAGAGCGATGGTGACTAGTCCACCAGGAGTTCCCAGCGGGGTGAC    1320

AGTCTGAAGACCTCGTCACCTGTGAGTTGATGTAGAGGAGAGCCACCTGACAGCTGACCA    1380

GGTGAAGAGAGGATAGAGTGAAGAACTGAGTGAGCCAAGAATCCTGGTCTCCTTGGGGGA    1440

ATTTTTGCTATCTTAATAGTCACAGTATAAAATTCTATTAAAGGCTATAATGTTTTTAAG    1500

CAAAAAAAAATCATTACAGATCTATGAAATAGGTAACATTTGAGTAGGTGTCATTTAAAA    1560

ATAGTTGGTGAATGTCACAAATGCCTTCTATGTTGTTTGCTCTGTAGACATGAAAATAAA    1620

CAATATCTCTCGATGATAAAAAAAAAAAAAAAAA                              1655
```

Figure 8 (continued)

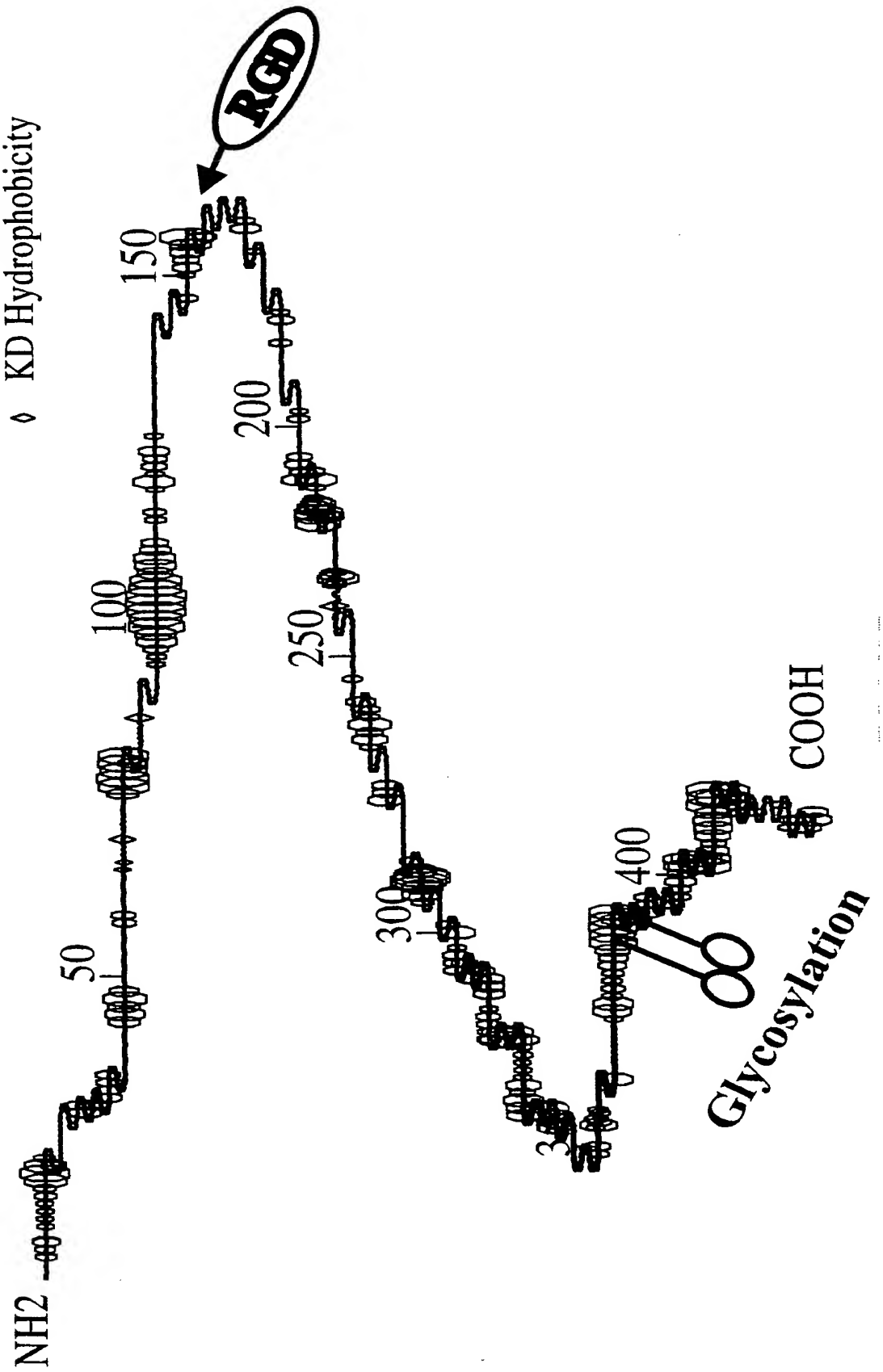
KD Hydrophilicity
KD Hydrophobicity
RGD
NH2
50
100
150
200
250
300
400
COOH
Glycosylation

Figure 9

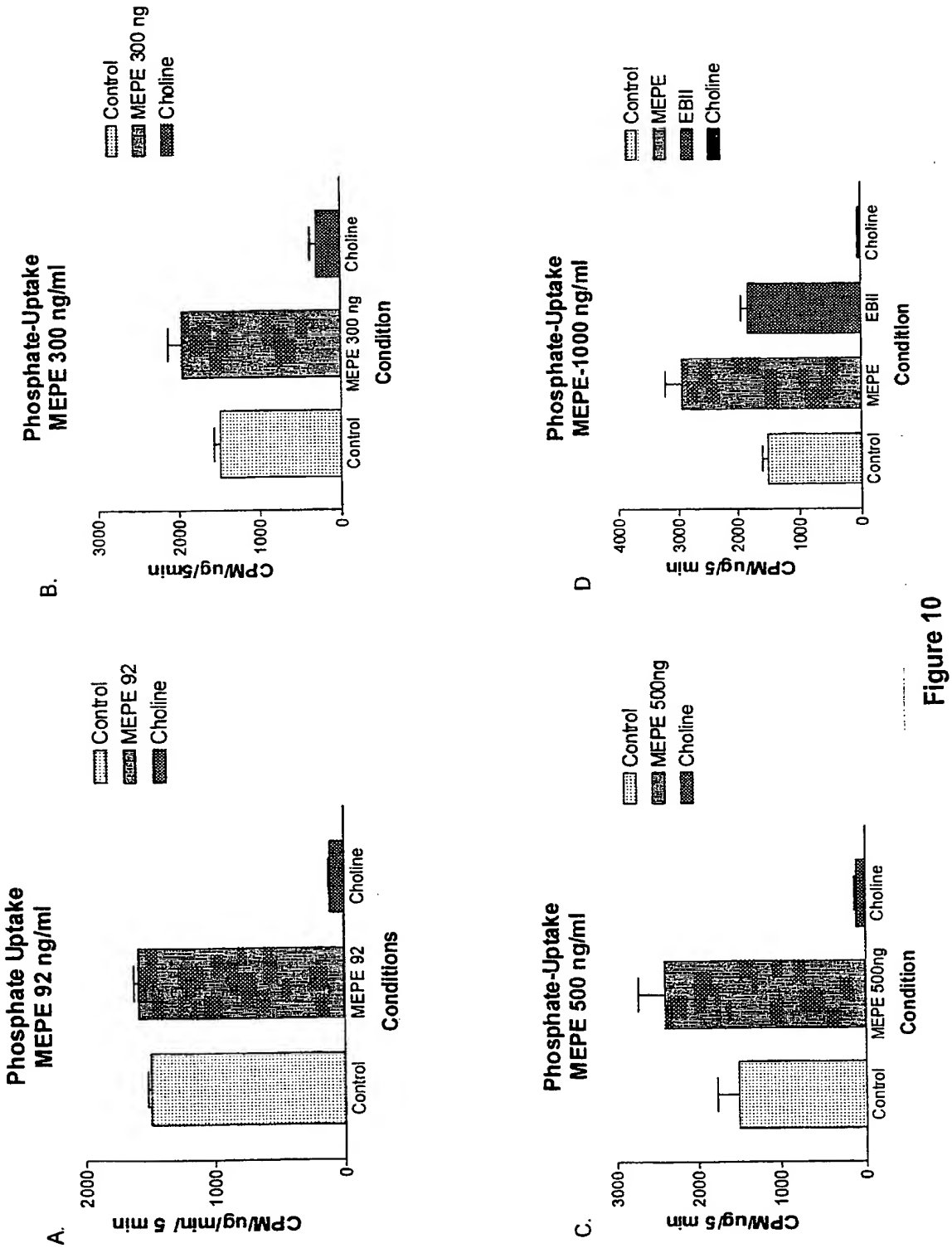
A.
Phosphate Uptake
MEPE 92 ng/ml
CPM/ug/min/ 5 min
2000
1000
0
Control
MEPE 92
Choline
Conditions
Control
MEPE 92
Choline
B.
Phosphate-Uptake
MEPE 300 ng/ml
CPM/ug/5min
3000
2000
1000
0
Control
MEPE 300 ng
Choline
Condition
Control
MEPE 300 ng
Choline
C.
Phosphate-Uptake
MEPE 500 ng/ml
CPM/ug/5 min
3000
2000
1000
0
Control
MEPE 500ng
Choline
Condition
Control
MEPE 500ng
Choline
D
Phosphate-Uptake
MEPE-1000 ng/ml
CPM/ug/5 min
4000
3000
2000
1000
0
Control
MEPE
EBII
Choline
Condition
Control
MEPE
EBII
Choline

Figure 10

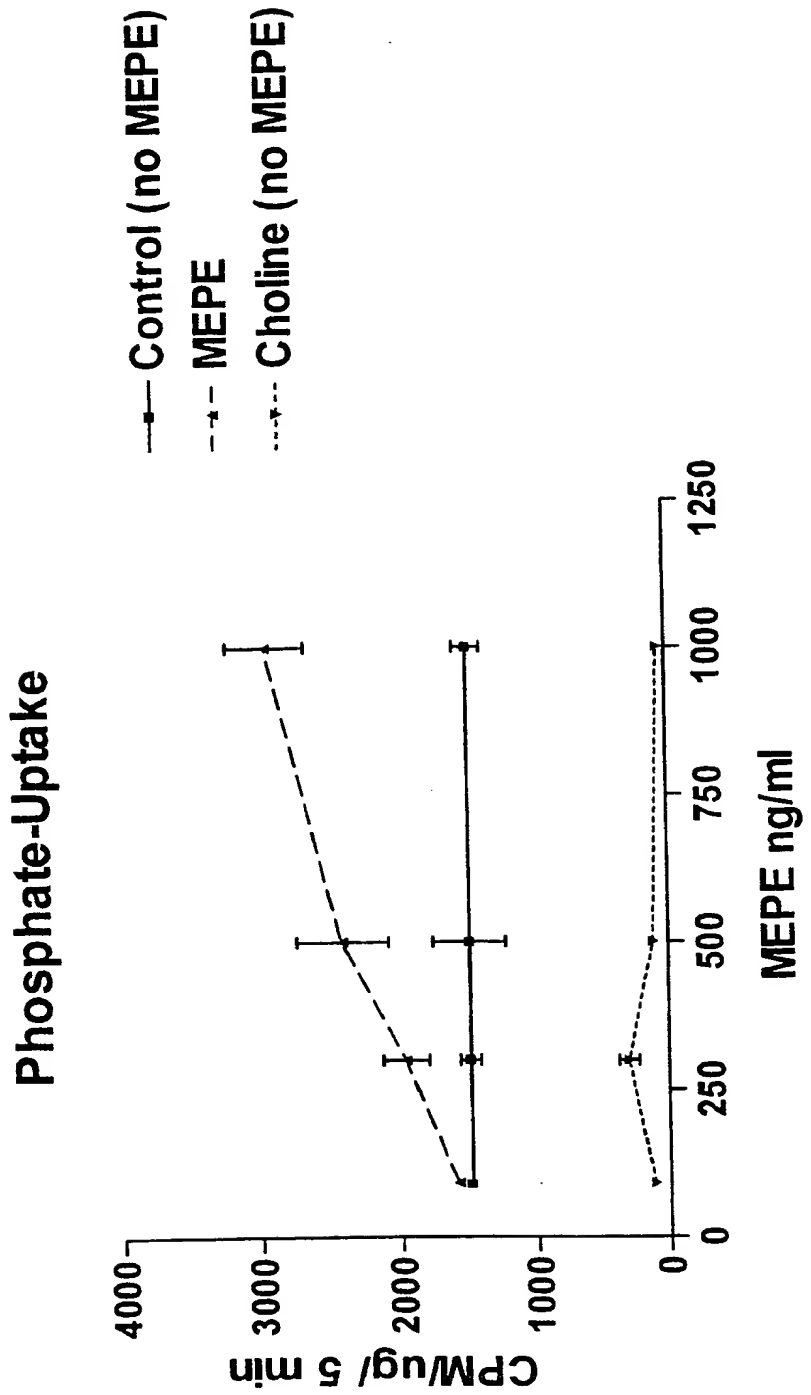
Phosphate-Uptake
Control (no MEPE)
MEPE
Choline (no MEPE)
CPM/ug/ 5 min
4000
3000
2000
1000
0
0
250
500
750
1000
1250
MEPE ng/ml

Figure 11

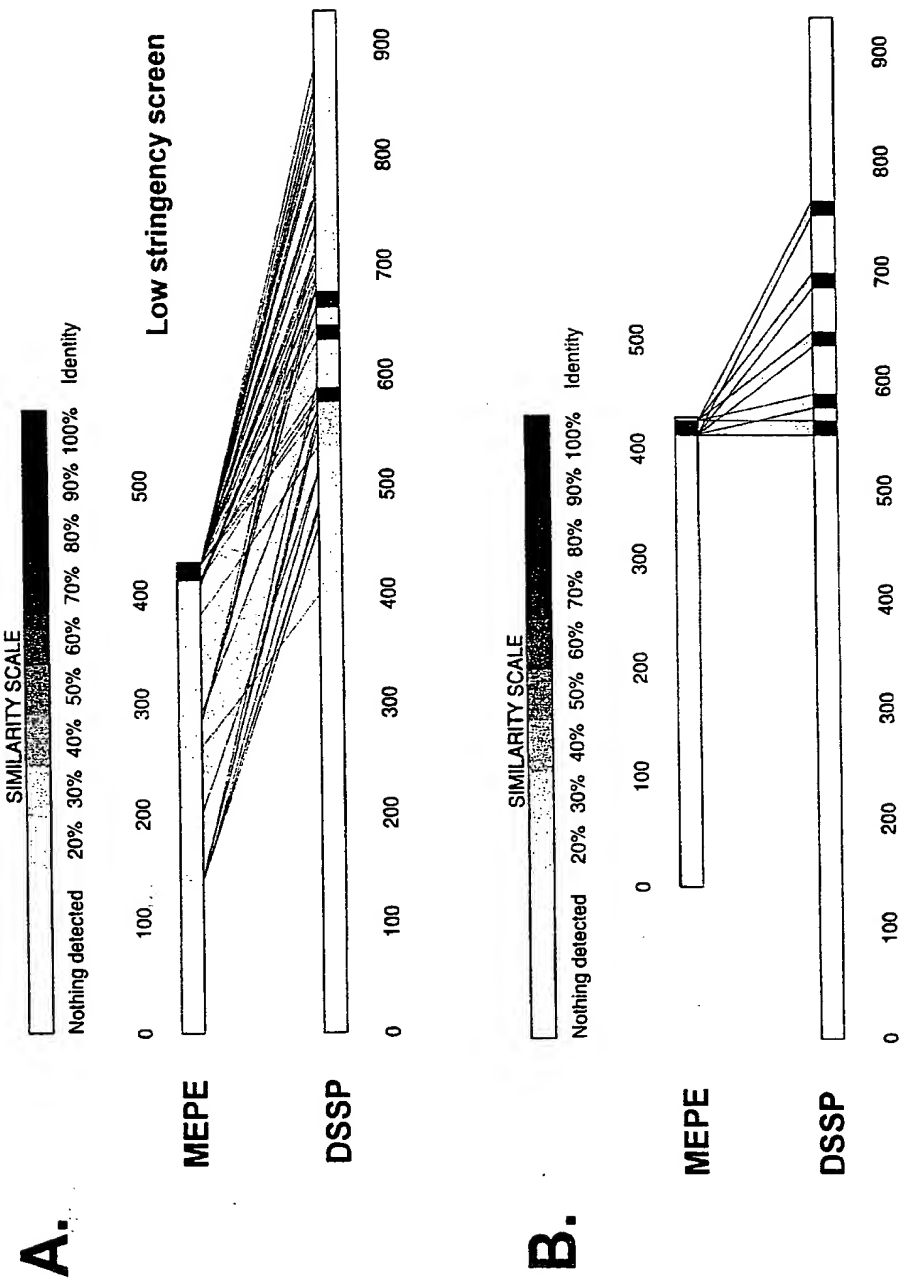
A.
Low stringency screen
SIMILARITY SCALE
Nothing detected 20% 30% 40% 50% 60% 70% 80% 90% 100% Identity
0 100 200 300 400 500
MEPE
DSSP
0 100 200 300 400 500 600 700 800 900
B.
SIMILARITY SCALE
Nothing detected 20% 30% 40% 50% 60% 70% 80% 90% 100% Identity
0 100 200 300 400 500
MEPE
DSSP
0 100 200 300 400 500 600 700 800 900

Figure 12

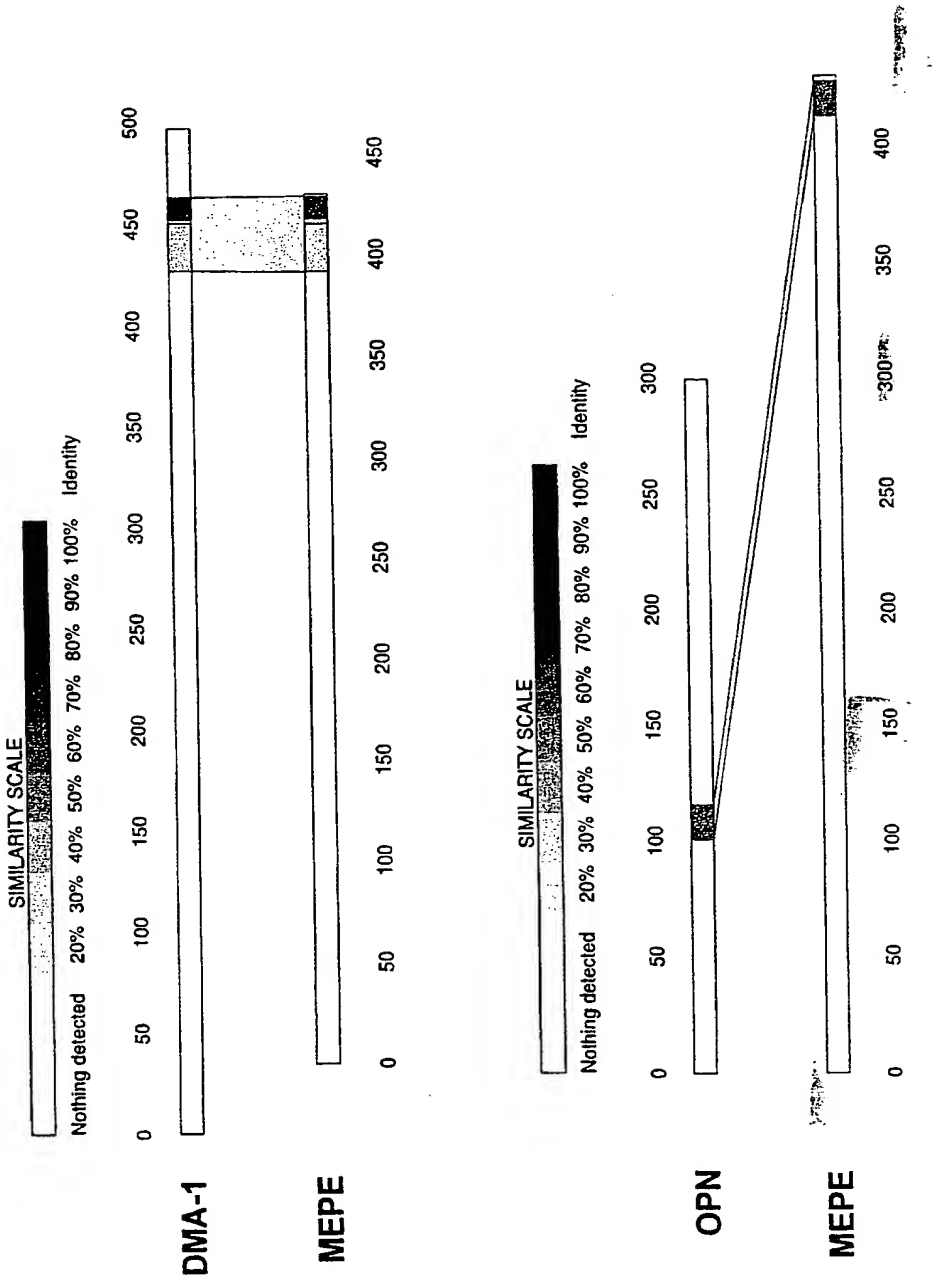

Figure 12 (continued)

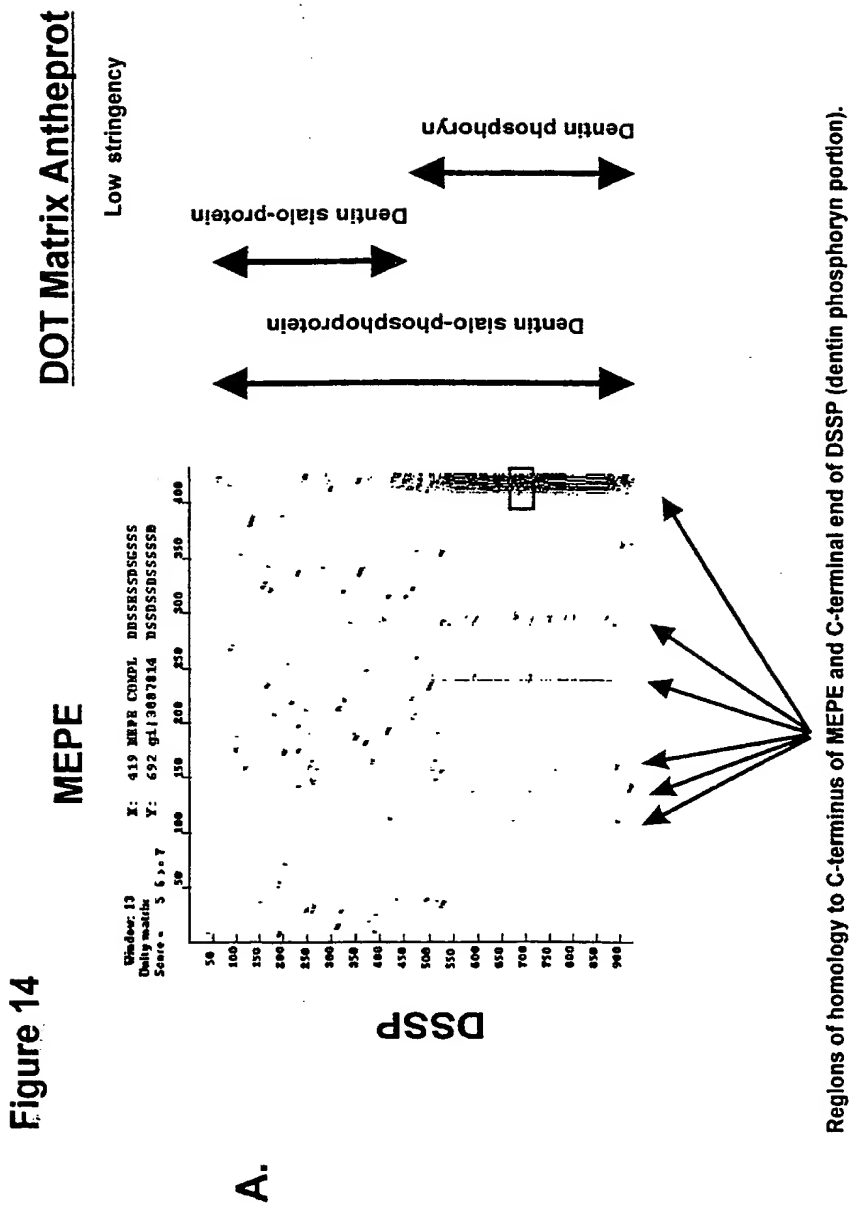

Figure 14

A.

Figure 13

B.

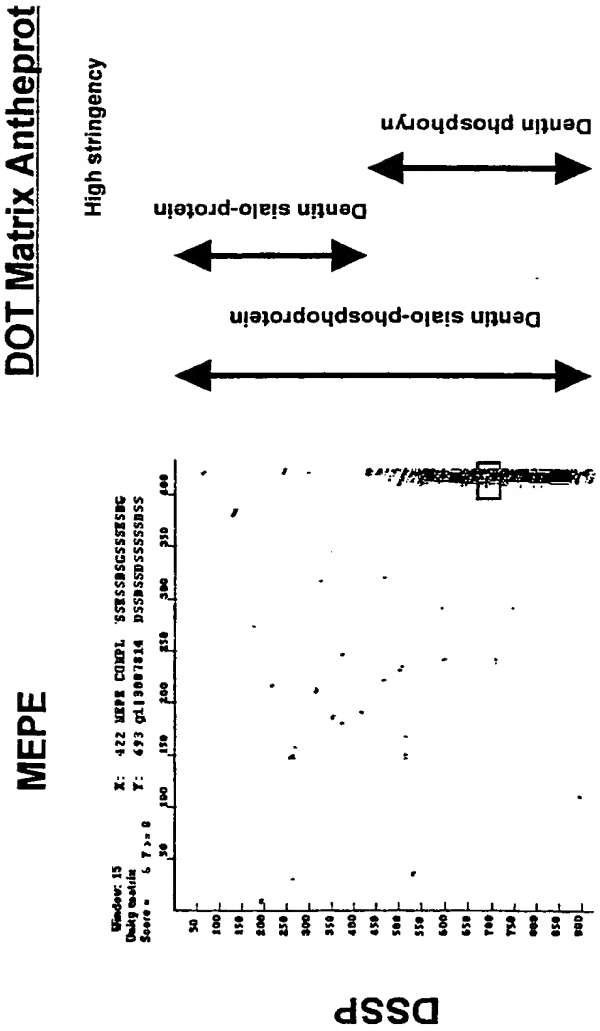

Figure 13 (continued)

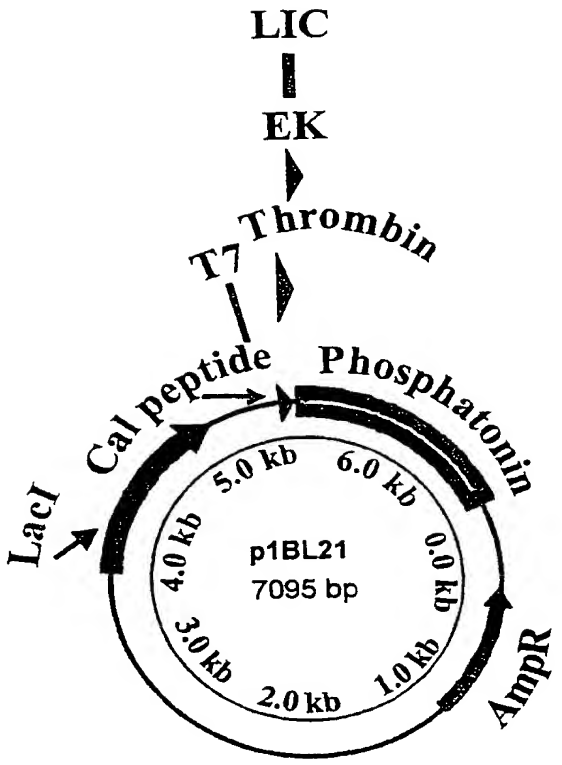
LIC
EK
Thrombin
T7
Cal peptide
Phosphatonin
LacI
AmpR
p1BL21
7095 bp
0.0 kb
1.0 kb
2.0 kb
3.0 kb
4.0 kb
5.0 kb
6.0 kb

Figure 14